

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	§	
Colligan, Thomas R., et al	§	
Appl. No. 09/727,667	§	Confirmation No.: 2026
Filed: 12/01/2000	§	Group Art Unit: 2179
For: SYSTEM AND METHOD FOR	§	Examiner: Chuong, Truc T.
PROVIDING ACOUSTIC	§	
MANAGEMENT IN A COMPUTER	§	

REPLY BRIEF PURSUANT TO 37 C.F.R. §41.41

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 Commissioner for Patents
 P.O. Box 1450
 Alexandria, VA 22313-1450

Dear Sir:

This Paper is submitted pursuant to 37 CFR §41.41 as a Reply Brief to the Examiner's Answer, mailed on March 7, 2007.

1. Background and Introduction

All of the claims in the application stand rejected based on a combination of three references: (1) Singer et al (U.S. Patent No. 6,314,473) (Singer); (2) Funches et al (U.S. Patent No. 5,305,160) (Funches); and (3) Stancil et al (U.S. Patent No. 6,601,168) (Stancil). In the "Response to Argument" section (section 10) beginning on page 7 of the Examiner's Answer, the Examiner characterizes each of Singer (paragraph A), Funches (paragraph B), and Stancil (paragraph C) individually. In paragraph D, beginning on page 9 of the Reply Brief, the Examiner characterizes Appellants' arguments as set forth in the in the Appellant Brief filed November 22, 2007, as follows:

- a. Singer fails to teach or suggest that when the method adjusts an operational level of a subsystem to achieve a selected acoustic level, and the method also makes corresponding adjustments to a power management system;
- b. There is no teaching of [a] fan control system to control temperature (not audio level), and peripheral bus; and

- c. There is no suggestion and motivation to combine Singer and Stancil, or there is no connection between the configurable acoustic levels of Singer and the post-test or constantly monitoring the audio noise and temperature of Stancil.

The Examiner provides a counter-argument in response to each of the above-noted arguments in Section D of the Examiner's Answer. Each of these counter-arguments is addressed in the section 3 of this paper below.

2. Legal Precedent

As the PTO recognizes in MPEP §2142:

The Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

The USPTO clearly cannot establish a *prima facie* case of obviousness in connection with the amended claims for the following reasons.

35 U.S.C. §103(a) provides that:

[a] patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains ... (emphasis added)

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, the references, alone, or in combination, do not teach the invention as a whole.

Therefore, it is impossible to render the subject matter of the claims as a whole obvious based on a single reference or any combination of the references, and the above explicit terms of the statute cannot be met. As a result, the USPTO's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to the claims, and a rejection under 35 U.S.C. §103(a) is not applicable.

There is still another compelling, and mutually exclusive, reason why the references cannot be combined and applied to reject the claims under 35 U.S.C. §103(a).

The PTO also provides in MPEP §2142:

[T]he Examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the Examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. ...[I]mpermissible hindsight must

be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

Here, the references do not teach, or even suggest, the desirability of the combination.

Thus, neither reference provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. §103(a) rejection of the claims.

In this context, the MPEP further provides at §2143.01:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. (emphasis in original)

In the above context, the courts have repeatedly held that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. In the present case it is clear that the USPTO's combination arises solely from hindsight based on the invention without any showing, suggestion, incentive or motivation in either reference for the combination as applied to the claims. Therefore, for this mutually exclusive reason, the USPTO's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to the claims, and the rejection under 35 U.S.C. §103(a) is not applicable.

3. Appellants' Reply to Examiner's Answers

This section addresses each of the Examiner's answers, or counter-arguments, set forth in section 10, paragraph D, of the Examiner's Answer, which begins on page 9.

- a. "Singer fails to teach or suggest that when the method adjusts an operational level of a subsystem to achieve a selected acoustic level, and the method also makes corresponding adjustments to a power management system."

First, it should be noted that the Examiner has mischaracterized Appellants' arguments in this regard. In particular, Appellants do not argue that "Singer fails to teach or suggest that... the method...makes corresponding adjustments to a power management system" (emphasis added). Rather, Appellants' position in this regard is that Singer fails to teach or suggest making corresponding adjustments by the power management system (i.e., the power management system making corresponding adjustments), as recited in the independent claims. As properly characterized, this feature of Appellants' invention as claimed enables the system to remain sufficiently cooled as to be operational even in cases in which the selected acoustic level is so low that, in addition to necessitating that seek time be increased to a maximum level, it is necessary to reduce the speed of the cooling fan to a minimum. In this situation, the power

management system makes corresponding adjustments—e.g., to compensate for the reduction in cooling power due to the reduction in fan speed. See, e.g., page 4, lines 6-20, of the original application. Any change in power consumption in the Singer system is a direct result of the inverse relationship between seek time and power consumption and is not a corresponding adjustment made by a power management system, as required by the independent claims. Therefore, for all of the reasons previously set forth and set forth herein, it is clear that, contrary to the Examiner's assertions, Singer fails to teach or suggest this claim element.

- b. "There is no teaching of [a] fan control system to control temperature (not audio level), and peripheral bus"

Again, Appellants are not in agreement with the Examiner's characterization of Appellants' argument in this regard and submit that the following is a more accurate summary of Appellants' argument:

There is no teaching or suggestion of a fan control system for wherein the adjusting an operational level of at least one subsystem of the computer to achieve the selected acoustic level comprises adjusting the speed of an internal fan (claims 4, 12, 20, and 33) or adjusting the speed of an internal bus (claims 7, 15, and 23).

Assuming *arguendo* that the Examiner is correct that Stancil teaches adjusting the fan speeds corresponding to the temperature of the computer system and assuming further that Stancil teaches adjusting the fan speed toward a target fan speed slowly so as to minimize noise, Stancil fails to teach adjusting the fan speed to achieve the selected acoustic level as required by dependent claims 4, 12, 20 and 33. Rather, Stancil teaches adjusting the fan speed to achieve a target fan speed, which speed is selected based on the need to adequately cool the CPU. It is notable that once the fan speed achieves the target fan speed the noise generated thereby will be dictated by the target fan speed; in other words, the ultimate goal is to achieve a target fan speed, which will necessarily result in a certain level of acoustic noise. In contrast, in Appellants' claimed invention, the ultimate goal is to achieve a selected acoustic level, with the fan speed being adjusted so as to achieve that acoustic level. Therefore, for all of the reasons previously set forth and set forth herein, it is clear that, contrary to the Examiner's assertions, Stancil fails to teach or suggest this claim element.

- c. "There is no suggestion and motivation to combine Singer and Stancil, or there is no connection between the configurable acoustic levels of Singer and the post-test or constantly monitoring the audio noise and temperature of Stancil."

In the final Office action, the Examiner states that "the system [of Singer in view of Funches] does not clearly mention performing a post-test to determine if further adjustment is

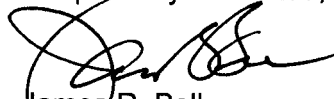
desired.” The Examiner goes on to cite Stancil as teaching at the Abstract and column 4, line 44, through column 5, line 3, “changing/adjusting the speed of a device by constantly monitoring an audio noise and temperature of the system” (emphasis original to Office action). It appears from the Examiner’s Answer in response to the present counter-argument of Appellant that the Examiner is now citing Singer as teaching the “post-testing” step (See, e.g., page 11, “It means the system of Singer constantly monitors/tracks/post-test[s] to make corresponding adjustments”). To the extent the Examiner is relying on such a teaching in Singer (which it appears from the plain language of the Examiner’s Answer that he is) to support his position that there is sufficient suggestion and motivation to combine the teachings of Singer and Stancil, such reliance is erroneous. Therefore, for all of the reasons previously set forth and set forth herein, it is clear that, contrary to the Examiner’s assertions, the Singer and Stancil references cannot be combined to reject the pending claims.

Additionally, even assuming, *arguendo* that the references are properly combinable, as previously noted in the Appellant Brief, it is clear that audio noise is never monitored or “post-tested” by Stancil; on the contrary, as described above, in Stancil, the fan adjusts at the stored ramp rate to whatever speed (and corresponding audio noise) is required to adequately cool the CPU.

4. Conclusion

In view of the foregoing, it is respectfully submitted that the claims are fully supported by the specification and that the various combinations of references fail to teach or suggest the subject matter of claims 1-5, 8-13, 15, 17 and 19-21. For all of the foregoing reasons, it is respectfully submitted that claims 1-5, 8-13, 15, 17 and 19-21 be allowed and a prompt notice to that effect is earnestly solicited.

Respectfully submitted,


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Susan C. Lien